

Remarks

The Office Action mailed November 21, 2003 and made final, has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-21 are now pending in this application. Claims 1-11 stand rejected. Claims 1 and 7 have been amended.

The rejection of claims 1-4, 7, 9, and 10 under 35 U.S.C. § 102(b) as being anticipated by Conrad (U.S. Patent No. 1,466,423) is respectfully traversed.

Claim 1 recites a fuse body for receiving a fuse element assembly, the fuse element assembly having opposite ends and a length therebetween, and the fuse element assembly including a helical fuse element extending substantially the entire length between the opposite ends, said fuse body comprising a first end, a second end spaced from the first end by a distance substantially equal to the length of the fuse element assembly, and a bore extending through said body between said first end and said second end, said bore comprising a clearing portion having a first cross sectional area and a positioning portion having a second cross sectional area, said first cross sectional area larger than said second cross sectional area to prevent the helical fuse element from contacting an interior surface of the clearing portion.

Conrad neither describes nor suggests a helical fuse element and a fuse body having a bore with a first cross sectional area larger than a second cross sectional area to prevent the helical fuse element from contacting an interior surface of the clearing portion as recited in claim 1. Rather, Conrad describes a series of elements connected to one another in a fuse (38), none of which extend helically. Specifically, Conrad describes a socket (2) and an insertable plug (4) with an attached fuse (38). The fuse (38) includes a tube (41), an upper ferrule (37) and a lower ferrule (42). A stranded conductor (43) connected to the upper ferrule (37) extends partially through the tube and is soldered to a stem (47). A terminal member (48) is threaded into the

stem (47) and is coupled to a fuse wire (51) extending within a cork (49), and also to a tensile wire (52), in another portion of the tube (41). A conducting wire (53) is linked to the fuse wire (51) and the tensile wire (52), and the conductive wire (52) extends the remainder of the tube (41), through a hole in the lower end cap (54) and is attached thereto by a screw (55). See Conrad Figure 3. The fuse element assembly does not include a helical element.

Claim 1 therefore is submitted to be patentable over Conrad.

Claims 2-4 depend, directly or indirectly, from independent claim 1. When the recitations of claims 2-4 are considered in combination with the recitations of claim 1, Applicants submit that dependent claims 2-4 likewise are patentable over Conrad.

Claim 7 has been amended in response to the assertion in the Office Action that portions of claim 7 are narrative in form. Amended claim 7 is believed to more clearly recite a structural attribute of the present invention, i.e., that the respective ends of the body are configured to receive conductive end caps. Applicants state on the record that neither former claim 7 nor claim 7 as amended herein is intended to invoke the application of 35 U.S.C. § 112, sixth paragraph. It is respectfully submitted that the recitations which are the subject of the at issue are not functional limitations as the Office Action supposes, but rather are structural recitations which do not implicate means plus function analysis of 35 U.S.C. § 112, sixth paragraph.

Specifically, claim 7 recites a fuse body for a fuse element assembly having an outer dimension, said fuse body comprising "a first end surface configured to receive have a conductive end cap enclosing said fuse body at said first end surface," "a second end surface configured to receive a conductive end cap enclosing said fuse body at said second end surface" and "a longitudinal bore extending through said fuse body from said first end surface to said second end surface, said bore comprising a positioning portion and a clearing portion, said positioning portion receiving the outer dimension of the fuse element assembly and maintaining the fuse element in a substantially centered position within said clearing portion, thereby

preventing the fuse element assembly from contacting an interior surface of the bore when the fuse element assembly is mounted within said bore."

Conrad does not describe a fuse body having a bore, and end surfaces that are configured to receive conductive end caps enclosing the body at the respective end surfaces. The lower end does not receive a conductive end cap enclosing the end of the sleeve, but rather the lower end of the Conrad sleeve (11) is open for expulsion of the fuse elements.

For the reasons set forth above, claim 7 is submitted to be patentable over Conrad.

Claims 9 and 10 depend, directly or indirectly, from independent claim 7. When the recitations of claims 9 and 10 are considered in combination with the recitations of claim 7, Applicants submit that dependent claims 9 and 10 likewise are patentable over Conrad.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of claims 1-4, 7, 9, and 10 be withdrawn.

The rejection of claims 6 and 8 under 35 U.S.C. § 103 as being unpatentable over Conrad is respectfully traversed.

For the reasons set forth above, it is respectfully submitted that the respective base claims (claims 1 and 7) of claims 6 and 8 are patentable over Conrad. When the recitations of claims 6 and 8 are considered in combination with the recitations of the base claims, it is respectfully submitted that claims 6 and 8 are likewise patentable over Conrad.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of claims 6 and 8 be withdrawn.

The rejection of claims 5 and 11 under 35 U.S.C. § 103 as being unpatentable over Conrad in view of Reese et al. (U.S. Patent No. 5,214,406) is respectfully traversed.

Claims 5 and 11 depend from claims 1 and 7, respectively, which are submitted to be patentable over Conrad for the reasons set forth above. It is submitted that Resse et al. adds nothing to the Conrad reference with respect to claims 1 and 7. Reese et al. does not describe a helical fuse element as recited in claim 1, and while Reese does describe conductive end caps enclosing ends of a fuse body, the provision of end caps enclosing the fuse body in the Conrad apparatus would presumably render the Conrad apparatus inoperative to properly expel the fuse elements from the sleeve (11). It is therefore respectfully submitted that Reese et al. teaches away from Conrad. In light of fundamental differences between the Reese et al. and Conrad devices, as noted in Applicants' previous response, it is respectfully submitted that the combination of Conrad in view of Reese et al. fail to suggest the recitations of claims 1 and 7.

Claims 1 and 7 are therefore submitted to be patentable over the combination of Conrad in view of Reese et al. When the recitations of claims 5 and 11 are considered in combination with the recitations of claims 1 and 7, claims 5 and 11 are likewise submitted to be patentable over the combination of Conrad in view of Reese et al.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of claims 5 and 11 be withdrawn.

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In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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